

# Surface treatment

Pumps
Bath agitation
Draining vacuum corrosive liquids
Standard filters
Metals recovery
Acid recycling
Nickel-satin bath treatment





For over 60 years, it is at the heart of the French Alps that we have been developing solutions for the filtration, transfer and treatment of industrial fluids.

# 6 reasons to choose SIEBEC



# **Advice & expertise**

Our experts guide you through the technical evaluation and improvement of your current setup.



# **Quality control**

Our filtration media are developed and tested in our laboratory to ensure optimal performances.



# Media analysis

SIEBEC LTS analyze your media and establish a filtration efficiency report thanks to a normalized bench test.



# **Competitive pricing**

Our management of the entire production cycle allows us to offer our products at highly attractive prices.



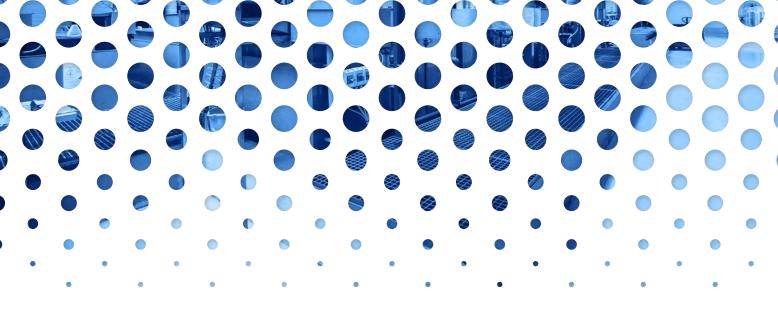
# **On-demand**

Our design office is specialized in the creation of installations with the highest requirements.



# **Express delivery**

Many of our products are in stock and shipped within 48 hours. Spare parts shipped in 24 hours.



# **01.**Transfer & suction



# Among the best efficiency on the market!

SIEBEC pumps are equipped with closed-blade turbines whose design has been optimized by numerous hydraulic simulations.

This enable them to reduce their electrical consumption and increase the efficiency by 50%.

Special attention has been paid to the balancing of the internal pressures, thus reducing the wear of the stops.

Magnetic drive pump	2
Mechanical seals pump	3
Vertical pump	4
Dosing pump	5
Bath agitation	7
Draining vacuum for corrosive liquids	8
	Mechanical seals pump  Vertical pump  Dosing pump  Bath agitation

# M SERIES

# Magnetic drive pump

Guaranteed leak-proof thanks to the magnetic drive, these pumps are ideal for transferring the most corrosive fluids.



# **Guaranteed leak-proof**

Strong magnetic coupling

### **Excellent wear resistance**

Ceramic/ceramic or graphite/ ceramic bearings

### **Excellent efficiency**

Closed centrifugal turbine coupled to a blade diffuser

### Improved protection

Built-in strainer

# **Automatic self-priming**

Volute with eccentric suction



**IE3 Motor** Excellent efficiency



# **Available materials**

Very high resistance to acids & alkalis and high temperature tolerance.

(PP:80°C/PVDF:110°C)











Flange

# M SERIES

Flow rate (m<sup>3</sup>/h)

0.7 - 43

Dynamic head (m)

4 - 22

Power(W)

	Flow rate (m³/h)	Dynamic head (m)	Motor power (W)	Max fluid density
M7	0.7	4 10		1.2
M15	2	6	45	1.2
M25	3	7	120	1.1
M35	3.5	10	180	1.4
M50	5	10	10 180	
M70	7	9.5	250	1.4
M100	10	18	750 - 1100 <sup>1</sup>	1.6 - 2 <sup>1</sup>
M140	16	19	1100 - 1500 ¹	1.6 - 2 <sup>1</sup>
M200	21	20	1100 - 2200 <sup>1</sup>	1.6 - 2 <sup>1</sup>
M250	26	19	1500 - 2200 ¹	1.7 - 2 <sup>1</sup>
M290	32.5	21.5	2200	1.5 - 1.7 <sup>1</sup>
M390	43	22 3000 - 4000 <sup>1</sup>		1.3 - 2 1

High density version (PVDF)

<sup>\*</sup>US norm couplings available on demand.

### A SERIES

# Mechanical seals pump

Ideal for the transfer of fluids charged with particles, the plastic design ensures an excellent chemical compatibility.





**IE3 Motor** Excellent efficiency



# **Available materials**

Very high resistance to acids & alkalis and high temperature tolerance.

(PP:80°C/PVDF:110°C)



# **Excellent wear resistance**

**Easy integration** 

small footprint

Ultra-durable carbide/carbide gasket

The mechanical seal design has a

### **Excellent efficiency**

Closed centrifugal turbine coupled to a blade diffuser

# **Automatic self-priming**

Volute with eccentric suction

# Improved protection

Built-in strainer







Flange



Grooved

# A SERIES

Flow rate (m<sup>3</sup>/h)

4.8 - 57

Nut

Dynamic head (m)

9 - 50

Power(W)

	Flow rate (m³/h)	Dynamic head (m)	Motor power (W)	Max fluid density*
A15	4.8	9	180	1.2
A18	10	18	750	1.8
A19	14	19	1100	1.7
A27	31.5	21.5	2200	1.4
A30	43	22	4000	1.5
A31P	52	32	5500	1
A32P	57	41	7500	1
A33P	48	36	4000	1
A32	57	50	7500	1

<sup>\*\*</sup>High density version available on demand

<sup>\*</sup>US norm couplings available on demand.

# T / ST / STS SERIES

# Vertical pumps

Without wearing parts (stops, mechanical seals...) they are guaranteed leak-free. Some versions allow important variations of the bath level.

### Submerged or outboard

Ultra-compact vertical design

### At the heart of innovation

ST pumps 20% more efficient than the market average

### **Excellent efficiency**

Closed centrifugal turbine coupled to a blade diffuser

### Very good life cycle

No mechanical seal or wear parts

### **Bath level variation**

Some pumps allow very high bath level variations

# STX0 and TXX0 versions

Cantilevered shaft without bearings

No mechanical seals : dry running possible

No wear parts : leak-proof.

### TXX1 versions

Long shaft with ceramic bearings

Leak-proof

Enables high bath level variation (>700 mm)

# STX2 and TXX2 versions

Cantilevered shaft and counter-turbine Outboard setup possible Dry running without problems





# IE3

**IE3 Motor** 

Excellent efficiency



NOX

# **Available materials**

Very high resistance to acids & alkalis and high temperature tolerance.

(PP:80°C / PVDF:110°C) Stainless steel STS versions for high temperature applications >

# Available couplings\*



Nut



Grooved





Flange

\*US norm couplings available on demand.

# T SERIES

Flow rate (m<sup>3</sup>/h)

1.3 - 31

Dynamic head (m)

4 - 22

Power(W)

	Flow rate (m³/h)	Dynamic head (m)	head (m) Motor power (W) Max fluid dens	
ST10 / 30 / 50	1.3 / 3.5 / 5	4/4/7	7 90 / 120 / 180 < 1.4 / <1.4 /	
T70	7.2	9	550	1.3
T100/101	10	13 / 16	750	1.3
T140/141	14	14.5 / 17	1100	1.3
T200/201	18.5	15.5 / 18.5	1100	1.3
ST22 / 42	2.9 / 4.4	4 / 5.2	120 / 180	< 1.6 / <1.9
STS52	5.2	8	550	2
T72	7	10.5	750	1.4
T102	11	13	1100	1.4
T / STS 142	14 / 16	15 / 12	1100	1.2 / 1.1
T /STS 202	18 / 20	17 / 14	1500 / 1400	1.25 / 1.2
T / STS 242	23 / 25	17 / 18.5	1500 / 2200	1.3 / 1.2
T / STS 262	27 / 29	19.5 / 22	2200 / 3000	1.4 / 1.2
STS 282	31	24.5	4000	1

<sup>\*\*</sup>High density version available on demand

# SPP SERIES

# Dosing pumps

Compact pump ideal for intermittent dosing of a wide flow rate range thanks to many pipes materials and motor speed available.





# Improved user experience

See-through cover to control proper motor rotation.

Easy pipe replacement.



# **Easy integration**

Ultra-compact pump

230V AC or 24V DC box setup

Direct plug into standard outlet.



# **High compatibility**

Pipes available : Tecknoprène®, Silicone, Viton®.

PP or PVDF couplings.

Very good capabilities on viscous liquids.



# Many options

IP55 rating.
Automation
ON/OFF switch.
Fuse.
Rapid coupling.
2 wheels rotor.

# SPP SERIES

Flow rate (I/h)

0.08 - 126

Rotation speed (rpm)

10 - 240

Power (W)



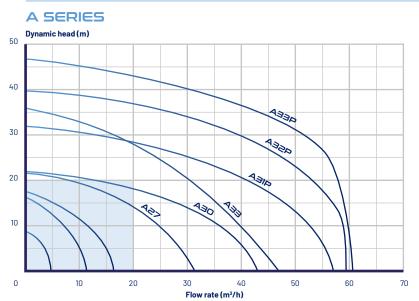


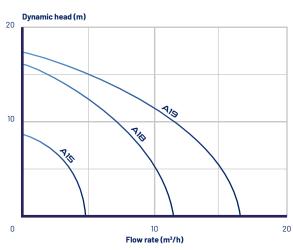


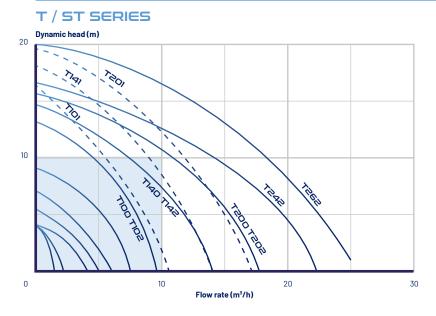
	SPP 4	SPP 50	SPP 90	
Flow rate (I/h)	0.08 - 3.6	0.94 - 15	20.4 - 126	
Max pressure (bar)	2	2	2	
Rotation speed (rpm)	10 - 60	65 - 125	65 - 240	
Power (W)	5 - 12 12 - 45		12 - 45	
Frequency (Hz)	50	50 50 50		
Power supply	<b>supply</b> 24V DC / 230V AC 2		24V DC / 230V AC	
Weight (kg)	<b>kg)</b> 0.4 1		1 - 1.5	

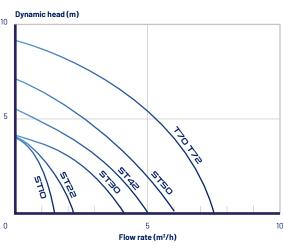
# Flow rate curves

# Dynamic head (m) Flow rate (m²/h)









Note: curves for STS pumps are being re-evaluated.

# Bath agitation

The Venturi technology guarantees energy savings and significant improvement of depot quality, while offering a safer environment.





# Limitation of evaporation

Significant reduction of bath evaporation (-90%).

Costs linked to the treatment and evacuation of effluents greatly reduced.



# **Energy savings**

Participates in maintaining the temperature of the treatment bath.

Reduced bath heating and cooling costs.



# Healthier working conditions

The evaporation reduction greatly improves the air quality within the treatment factory.



Avoids bath stagnation and mixes active agents, increases deposition factor.

- Improved depot quality with homogenous layers. Optimal depot: porosity, hardness, abrasion resistance...
- Heat dissipation at the cathode/electrolyte interface. Venturi principle multiplies by 5 the volume of pumped liquid.

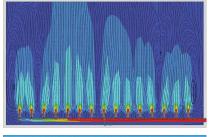


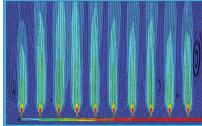




# Nozzle support

Increase the rigidity and durability of the setup. Available in PP, PE, PVDF, and PVC.





# Optimization of your bath agitation system.

SIEBEC helps you to get optimal bath agitation to ensure its homogeneity and the proper agitation around the parts, even complex.

Our simulation software determines the number, size and orientation of the nozzles anywhere in the bath.

Each study is unique to answer the specific need of the client.

# **VENTURI NOZZLES**

Materials

Polypropylene (PP)
Polyvinylidene fluoride (PVDF)
Stainless Steel

Applications

Electroplating
Deoiling
Stripping
Pre-treatment
Anodizing

. . .

# ACIDVAC

# Pneumatic draining vacuum for corrosive fluids

Allows the cleaning and suction of corrosive liquids and sludge. Its robust design is perfectly fit for the most demanding industrial sites.



### Option: parts recovery tank

Connected in front of the ACIDVAC, it enables the recovery of parts at the bottom of the process tank.

Compatible with BAGTECH™ bags, it has the possibility to act as a prefilter to filter sludge and other fine residues.





# Compressed air powered

Sucks both sludge and liquids up to a height of 3.5 m (d=1).

Automatic stop of the suction once the tank is full.



# Easy tank draining

Draining at the bottom, through a wide section hole.

Quick draining of both liquids and sludge, without retention.



# Improved work environment

Safer draining of acid process tanks.

Very low sound level 72 dB(A) only.

Option : external exhaust of toxic fumes.



# Industrial versatility

Highly mobile and perfectly suited for industrial sites.

Cleaning of tanks, retention area, floor...

# **ACIDVAC**

Flow rate (liters/min)

140

Dynamic head (m)

3500

Tank capacity (liters)

70

Materials (body / seals)

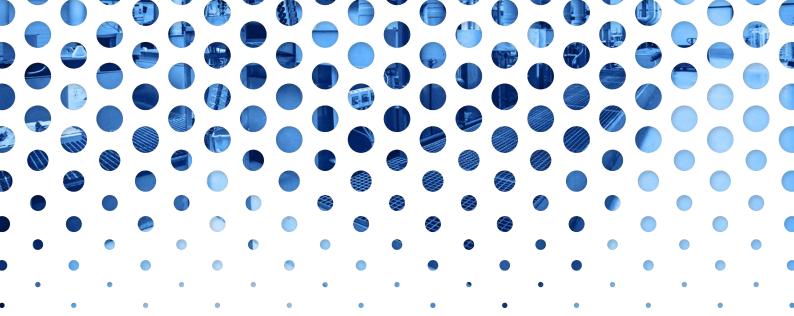
# Polypropylene / EPDM

Sound level (dB(A))

72

Dimensions (cm)

65 x 48 x150



# 02.

# Filtration & treatment

MC SERIES	Low flow rate filters	12
L SERIES	Medium flow rate filters	12
S SERIES	High flow rate filters	12
P SERIES	Very high flow rate filters	13
J SERIES	Vertical filters	13
H SERIES	De-oiler	13
ELECTRUM	Electrolytic metal recovery	14
R SERIES	Metal recovery on resin	14
ACIDPURE	Acid bath recycling	15
PBNA	Nickel-satin bath treatment	16
MÉDIAS	Filtration consumables	17

# MC/L/S/P/J/H SERIES

# Standard filters line

SIEBEC plastic filters offer an excellent chemical and mechanical resistance. Able to cover a wide range of flow rates, they enable many treatments and filtrations.

> Consult us for the design of custom made filtration skids

# **FEATURES & BENEFITS**



# **Quick opening**

The ergonomic handle enables the one-handed opening of the filter in a few seconds only. [MC, L, J & H SERIES]



# **Easy integration**

Fixation legs molded onto the chassis allow for quick and durable installation of SIEBEC filters.



# Filtration modularity

SIEBEC filters are compatible with a wide range of filtration methods and their media are switchable among them.

[SIEBEC Ecosystem]



# **Draining & dissolution**

Allows the addition of additives, dissolution of salts, use of adjuvants or active carbon as well as draining of the tanks.

# Pumps protection Thermic and dry-running protection. Filter clogging detection

# **AVAILABLE COUPLINGS\***









Nut

Grooved

Flange

Threaded

# Materials resistance

	ACIDS	ALKALIS	MAX TEMPERATURE
Polypropylene (PP)	++	++	80°C
Polyvinylidene fluoride (PVDF)	+++	+	110°C
Glass fiber reinforced polypropylene (PP GF)	++	++	80°C
Stainless steel (INOX)	+	+++	150°C

Resistance: - not compatible / + good / ++ very good / +++ excellent

# MC/L/S/P/J/H SERIES

# Compatible filtration media





# L-TECH™

# HighFlow pleated cartridge

Very large filtering surface (5 m<sup>2</sup> by 20") provided by SIEBEC patented combs. Washable and reusable, this cartridge is economical and durable. Easy handling thanks to its patented folding handle.



# **CARTRIDGE SET**

### Fine depth filtration

Depth filtration on thermowelded or wound cartridges (7 to 36 per set). Very economical media, quick to replace.



# DISC SET

### Paper discs filtration

From 20 to 54 paper filtration discs with the possibility to add actived carbon. Very affordable media but the replacement of discs one-by-one is time-consuming and requires particular care.



# **BAGTECH**<sup>TM</sup>

### Filtration bag

Monofilament filtration bag, washable and reusable (prefiltration/pump protection). Felt bag for fine particles filtration.



# **OILTECH™**

### Deoiling container

Microfibers container to recover oils in filtered fluid. 500 g of PP microfibers can collect 6 liters of oil.



# **CARBOTECH**<sup>TM</sup>

### Activated carbon container

Allows the capture of organic pollution present in copper, nickel and others baths. Very efficient for the reduction of soluble pollution in effluents.



# **MAGTECH**<sup>TM</sup>

# Magnetic filtration

Collects ferromagnetic particles present in the liquid to filter. Available in 3000 and 11000 Gauss. Ideal upstream of a pleated or depth filter to enhance their performance and life cycle, MAGTECH™ can be coupled with a BAGTECH™.

# MC SERIES

Low flow rate filters

Flow rate  $0.7 - 4 \text{ m}^3/\text{h}$ 

 $\begin{array}{c} \text{Max filtration area} \\ \text{N/A} \end{array}$ 

Materials: PP or PVDF Filter height: 4" / 10" / 20" Filtration tank: 1 or 2 Dissolution tank: N/A Parallel or serial filters







# **L SERIES**

Medium flow rate filters

Flow rate  $1.5 - 18 \text{ m}^3/\text{h}$ 

Max filtration area  $15~\text{m}^2$ 

Materials: PP or PVDF Filter height: 10" / 20" / 30" Filtration tank: 1 or 2 Dissolution tank: 16 liters

Parallel filters







# **S SERIES**

High flow rate filters

Flow rate  $10 - 28 \text{ m}^3/\text{h}$ 

Max filtration area  $10 \; \text{m}^2$ 

Materials: PP GF Filter height: 20" Filtration tank: 1

Dissolution tank: 30 liters





# Compatible filtration media

		L-TECH™	STANDARD Cartridges	FILTRATION DISCS	CARBOTECH™	OILTECH™
MC SERIES	Quantity per tank	_	1-2	<u>-</u>	<u>-</u>	1
4" / 10" / 20"	Total filtration area		N/A		N/A	N/A
L SERIES	Quantity per tank	1	7	32 / 64 / 96 (Ø195 mm)	1	1
10" / 20" / 30"	Total filtration area	2.5 - 15 m <sup>2</sup>	N/A	0.54 - 5.2 m <sup>2</sup>	N/A	N/A
S SERIES	Quantity per tank	2	12	60 (Ø258 mm)	2	2
20"	Total filtration area	10 m²	N/A	3.1 m <sup>2</sup>	N/A	N/A

Note: "total filtration area" refers to the maximal filtration area of the range.

# P SERIES

Very high flow rate filters

Flow rate  $16 - 80 \text{ m}^3/\text{h}$ 

 $\begin{array}{c} \text{Max filtration area} \\ 40 \ m^2 \end{array}$ 

Materials: PP GF Filter height: 20" Filtration tank: 1 or 2 (20") Dissolution tank: 100 liters Parallel or serial filters





# **J SERIES**

Vertical filters

Flow rate  $1 - 17 \text{ m}^3/\text{h}$ 

 $\frac{\text{Max filtration area}}{5 \text{ m}^2}$ 

Materials: PP or PVDF Filter height: 10" or 20" Filtration tank: 1(10" or 20") Dissolution tank: not available







# **H SERIES**

De-oiler

Flow rate  $4 - 9 \text{ m}^3/\text{h}$ 

 $\begin{array}{c} \text{Max filtration area} \\ \text{N/A} \end{array}$ 

Materials: PP Filter height: 20" Filtration tank: 1(20") Dissolution tank: not available







# Médias de filtration compatibles

		L-TECH™	STANDARD Cartridges	FILTRATION DISCS	CARBOTECH™	OILTECH™
P SERIES	Quantity per tank	4	36	54 (Ø456 mm)	46.4 liters	4
20"	Total filtration area	40 m²	N/A	8.4 - 16.8 m²	N/A	N/A
J SERIES	Quantity per tank	1/1	1-7	32 / 64 (Ø195 mm)	5.8 / 11.6 liters	1
10" / 20"	Total filtration area	2.5 - 5 m <sup>2</sup>	N/A	8.4 - 16.8 m²	N/A	N/A
H SERIES	Quantity per tank					1
	Total filtration area	-	N/A	-	N/A	N/A

Note: "total filtration area" refers to the maximal filtration area of the range.

### **ELECTRUM & R SERIES**

# Precious metals recovery

Devices intended for the recovery of metals contained in diluted or concentrated solutions.

# **ELECTRUM**

Electrolytic recovery

Flow rate (m³/h)

1.8 - 3

Materials

PP

Max temperature (°C)

60

Filtration

Cartridge



### **Benefits**

Able to recover very low concentrations (<5 ppm) depending on applications. Zero metal loss.

Efficient on all metals: Gold, Palladium, Rhodium, Ruthenium, Silver, Copper, Nickel...

Ease of melting and refining: quick cartridge replacement and easy recovery. Continuous destruction of cyanides during the process by addition of ECN.



Rapid return on investment



**Efficient on all metals** 



Recovery on resin

Flow rate  $(m^3/h)$  0.7 à 3

Materials

PP

Max temperature (°C)

80

Filtration

Resin





### **Benefits**

Prefiltration at 1 µm on thermowelded cartridge (e.g. QUALITHERM™)
Only one run on ion exchange resin required.

2 models available: R3 for volumes under 300 liters, and R12 for volume above.

# ACIDPURE

# Acid bath recycling

Balance and concentration control of aluminum in anodizing bath in a completely automatic way in order to ensure constant quality of the treatment.

Other applications: sulfuric acid, nitric acid...





# Durable and profitable investment

Acid sulfuric consumption reduced by half.

Removal of a significant share of costs linked to maintenance.

Reduction of the environmental impact through acid recycling.

Up to 94% sulfuric acid recovered!

# PBNA

# Nickel-satin bath treatment

This automatic treatment station allows the conservation of optimal bath properties.





# **Automatic system**

Valve control and automatic operation modes.

Automatic rinsing, venting and coating.

Saving and control of the process data.



# Quality & savings guaranteed

Minimal reject rate thanks to reproducible results.

Reduced operator errors. Prevent incorrect input.

Lower consumption of active principles.

### **CONSUMABLES & ACCESSORIES**

# Filtration media

A wide selection to answer all the needs of surface treatment.



### **QUALIBOB™**

### Standard wound cartridge

- 1 to 200 µm
- Ø ext: 80 / 110 mm
- Cotton (140°C), PP (74°C)
- Depth filtration through thread winding on PP or stainless steel core



# **QUALITHERM™**

# Standard thermowelded cartridge

- 0,5 to 150 μm (nominal)
- PP (75°C), Nylon (120°C), PE (120°C)
- Powerful depth filtration thanks to the density gradient



# QUALICARB™

### **Activated carbon cartridge**

- Prefiltration PP 5 μm
- Adsorption on compacted extruded GAC carbon
- Ø ext : 63 mm
- Improved life cycle compared to traditional carbon cartridges



# L-TECH™/S-TECH™

# Large filtration area pleated cartridge

- 0,2 to 100 μm (nominal & absolute)
- Ø ext : 180 / 310 mm
- PP (80°C), GF (90°C), PE (92°C), Nylon (92°C)
- Inward filtration
- · Washable & reusable



# PAPER DISCS

# Stackable discs with filtration paper

- 1 to 200 µm
- Ø ext : 165 / 258 / 456 mm
- Cotton (140°C), PP (74°C)
- May be loaded with activated carbon



# **QUALIPOCHE**<sup>TM</sup>

# Filtration bag

- 0,5 to 1500 µm
- PP (90°C), PE (130°C), PTFE, Nomex, Nylon (150°C)
- Ø ext : 88 to 260 mm
- · Washable & reusable
- Tool less setup



### ANODTECH™

### Anode bag

- Weight: 210 to 950 g/m<sup>2</sup>
- Air permeability: 7 to 720 l-dm²/min
- Stitches: simple / double / spot / weld
- Attach: VELCRO, laces, holes, eyelets...
- Option : double bottom



### **PRESSTECH™**

# Filter press canvas

- Weight: 140 to 1000 g/m<sup>2</sup>
- Permeability: 2 to 1000 l/ dm²/min
- Canvas / Twill / Satin
- Monofilament / Multifilament / Fiber spun yarn
- PP / Nylon / PET

### **CONSUMABLES & ACCESSORIES**

# Special treatments

A wide range to answer all the needs of the surface treatment industry.



# **ACTIVATED CARBON**

### TS special granules

- Made from coconut, which pores structure offers optimal adsorption
- · Formulation specific for Nickel available



### PP MICROFIBERS

### **Deoiling microfibers**

- Material: polypropylene
- 500 g collects 6 liters of oil
- Unlimited storage in a dry environment
- · Safe to incinerate



### RESIN

### Ion exchange resin

- Strong cationic, strong anionic, weak anionic
- Resin specific for precious metals
- Specific resin for various applications

# The essentials

# **FLOW METERS**

Ludion or electronics



- Max temperature depending on the model: 60°C to 100°C.
- Max pressure depending on the model: 12 to 20 bar.
- Sensor/float material: Stainless steel 316L, PVDF or PTFE.
- Body material: PP, PVDF, PVC or PMMA.

# SPHERICAL FLOATS

Optimal floating cover



- Available in polypropylene (PP), polyvinylidene fluoride (PVDF) and high density polyethylene (PEHD).
- Compatible with temperatures up to 160°C.
- Many benefits: energy savings, product loss reduction, ice retardant, safer environment, handling of submerged parts.

# **HULL CELL**

Monitoring of process bath



- Injection molding cell.
- Available in plexiglas and polypropylene.
- Accessories: air pump, screens for Molher cell and Hull cell agitator.
- Numerous plates available: bright steel, bright zinc-plated steel, brass-plated steel, satin-galvanized steel, stainless steel 304, polished copper and polished brass.
- Wide choice of anodes: silver, copper, copper phosphorus, brass, nickel, lead, tin, tin lead 40/40 and 90/10, stainless steel 316, titanium platinum and zinc.





A question? Need advice? Our experts answer you.

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# Discover SIEBEC Group

